



List of Laboratory Equipment FOR BIDDING

	PARTICULARS	QUANTITY	UNIT	UNIT COST	TOTAL COST	END USER
A. LABORATORY EQUIPMENT FOR THE COLLEGE OF ENGINEERING AND APPLIED TECHNOLOGY						
A.1	ETHANOL DISTILLER material: 304 stainless steel, condense pipe : red copper, capacity 12L, bucket size-25*40CM, capacity 20L, bucket size-25*40CM; Capacity: 30L; bucket size : 25*25CM, additional feature: food grade 304 stainless steel, healthier and mmore durable- large space for purification, more ideal effect, the container can be used as fermentation tank, adopt four times cooling technology, 220 VAC, 60 Hz.	set	1	28,000.00	28,000.00	CEAT
A.2	MILLING AND SIZE REDUCTION MACHINES all product contact parts AISI 316 and non contact parts AISI 304, high speed milling, granulating, pulverizing, mixing and size redution of wet and dry material. Output capacity 50 kg to 200 kg per hour. Easy removable contact parts for cleaning and inspection. Easy mobility. variable force by swing better having knife and impact edges are rotating within screen. Direction of beaters can be changed by forward -reversible switch. Various combination of perforated sieves and wire mesh. Other features. ACX frequency drive variable speed, belt less drive, inline milling process withr HSMG and sifter, flame proof electrical. Safety featurres. over load protection. 220 VAC, 60 hz.	unit	1	80,000.00	80,000.00	CEAT
A.3	MULTI GAS ANALYZER sampling: multiple industrial pump gas sampling, ten grades ofp umping flow rate for selection. Sensors: allows various principle sensors tube combined in any number, up to 18 sensors; combustibile: catalytic combustion principle or infrared principle; oxygen: electrochemical principle or zirconia principle; toxic: electrochemical principle; CO2: infrared principle; VOC: PID photoion principle, CH4; catlytic combustion principle or infrared principle+C35e, He: thermal conductivity principle, tempreature and humidity sensors, pressure sensors (optional) other principles of the sensor can be customized. Maasure range: 0-1, 10,100 1000,5000,50000,100000 PPM, 0-100mg/L, 200mg/L; 0-11% LEL; 0-10%, 20%, 99.9%, 100% vol (measure range and customized); Resolution: 100% LEL; 0,01%vol.; Precision: ≤±2%F.S (higher precision can be customized). Temperature and Humidity: 20-50°C, resolution: 0.1°C; humidity: 0-99% RH, Resolution: 1%RH Temperature and Humidity; Temperature: -20-50°C, Humidity: 0-99% RH, Resolution: 1%RH; Pressure: 0-5-2.0 bar; Screen: 3-5inch HD LCD screen with resolution 320*480, display: formula, concentration data, Unit, Curve, Batter power, time, temperature, humidity, pressure (optional) pump status, wireless status, printer status, screen shot status, Alarm: buzzer, red LED and alarm status on the display, fault alarm, pump abnormal alarm, low battery alrm. An independent SD memory is included. 220 VAC, 60 Hz	set	1	16,000.00	16,000.00	CEAT
A.4	PRECISION BOMB CALORIMETER operator time per test: 4 to 5 sample/hour; resolution of the temperature sensor - 0.01°Centigrade; power on time- continuous operation; Repeatability (%RSD) 0.1%; bomb type -removable; oxygen filling - semi-automatic; bomb washing - manual; PC software - advanced; correction factors 2; mass entry- auto or manual; keyboard - built in 16 keyboard; display - 16x 2 Alfa numeric Jumbo LCD blue backlight; calibration - factory, calibration not required again; printing of results - in built printer or PC report; PC connection - RS232 or USB; closure type- screw cap; calomrimeter type- microprocessorbased oxygen bomb caorimeter; peak temperature detection - yes; real time clock calendar - yes; power supply - main 220-260 VAC	unit	1	56,000.00	56,000.00	CEAT
A.5	GRAVITY CONVENTION LABORATORY OVEN cubic foot capacity: 0.7 cubic feet, maximum temperature: 437 °F (225°C), wattage: 600W. Amps: 5.22. Interior dimensions: 12Wx10Hx10D. Exterior dimensions: 14"Wx17"Hx10"D. Exterior dimensions: 14"Wx17"Hx12"D, 220 VAC, 60 Hz.	set	1	30,000.00	30,000.00	CF
A.6	WATER QUALITY METER measures 100m depth and up to 11 parameters including pH, DO, turbidity, conductivity, temperature, and salinity, with GPS interface port, depth of 100 meters, 220 VAC, 60 Hz.	set	1	50,000.00	50,000.00	CF
A.7	HYDRAULIC PRESS black; 20 tons, 220 VAC, 60 Hz.	set	1	20,000.00	20,000.00	CF
Sub-total					280,000.00	



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B. LABORATORY EQUIPMENT FOR VETERINARY MEDICINE							
B.1	COMPREHENSIVE HAEMATOLOGY ANALYSIS WITH 5-PART DIFFERENTIAL	Can process 16-20 samples per hour, and is designed to determine the following 24 hematology parameters from 50 µl (2 x 25 µl) of whole blood: WBC, LYM #, MON#, NEU#, EOS#, BAS#, LYM%, MON %, NEU%, EOS, BAS%; HBG, RBC, HCT, MCV, RDWc, MCH, MCHC, RDWs; PLT. MPV, PCT, PDWc, PDWs: calibrated to analyze multiple veterinary species. Further may periodically be added through a free software upgrade; with a touchscreen interface and a reagent pack; Rapid CBC analyses, with full five-part differentials. A database for up to 5000 records, with USB drive backup capability; Automated on-screen reminders, and illustrated instructions to simplify routine maintenance tasks; Quick reagent pack change method; can be connected to printer; with reagents and rotor, 220 VAC, 60 Hz.	set	1	385,000.00	385,000.00	CCARD
B.2	BLOOD CHEMISTRY MACHINE	26 parameters (ALB, CHOL, LDH, TRIG, ALKP, CK, LIPA, UCREA+, ALT, CREA, Mg, UPC*+, AMYL,GGT, NH3, UPRO+,AST, GLOB*, PHOS, URIC, BUN, GLU, TBIL, Ca, LAC, TP) 7 prepackaged panels and 39 species - and age specific reference ranges; requires a minimum of 40 µL of sample to run one test plus 10 µL for each additional test; Universal power supply ; with accessories (colored printer, keyboard XT 1.0, Keyboard AT 2.0, keyboard drawer, pipette, box, slides); with rotors and reagents; product use demonstration and maintenance. 220 VAC, 60 Hz.	unit	1	385,000.00	385,000.00	CCARD
B.3	DIGITAL BIOLOGICAL MICROSCOPE	includes built-in 3.0 mega pixel digital camera and includes software. Microscope Specifications: Head: Siedentopf trinocular head with 3rd tube as built-in digital camera. Eyepieces: Widefield N-WF10x/20mm with diopter control on both eyepieces. Eyepiece accepts 25mm diameter reticle. Ergonomic viewing angle of 30° incorporates interpupillary distance of 55-75mm. Nosepiece: Reversed quintuple nosepiece with positive click stops and rubber grip. Objectives: CCIS EC Plan Achromat 4x, 10x, 40x (spring), 100x (spring, oil). Full Plan Phase Contrast 10x, 20x, 40x, 100x available including phase condenser with brightfield/darkfield options and phase centering telescope. Stage: 175mm x 140mm mechanical stage with vernier scale. Movement of 76x50mm range. Focusing: Brass gears, Z-axis movement with 25mm stroke. Fine focus with 2µm minimum increments, coarse focus with torque adjustment. Stage lock for high samples. Condenser: Rack and pinion mounted focusable N.A. 0.90 Abbe condenser with iris diaphragm and slot. Illumination: 6v/30w quartz halogen Koehler illumination with stepless intensity control. Microscope Power Supply: 110v~240v variable voltage. Digital Specifications: Imaging Device: 3.0 mega pixels, 1/2" CMOS. Effective Pixels: 2048 x 1536. Maximum Still Image Resolution: 2048 x 1536 live image resolution. Maximum Frame Rate: 10 frames per second @ 2048x1536, 40 frames per second @ binning. Maximum Data Transfer: 480MB/second through USB2 connection. TWAIN compatible Camera Power Supply: 5v self-power through USB connection. Minimum System Requirements: WINDOWS - XP or VISTA, P4, 1GHz, 256MB RAM, USB 2.0. MAC - OSX, 1GHz, 256MB RAM, USB 2.0. Updated software. Calibration Slide: Certified printed calibration slide. user's manual.	unit	1	230,000.00	230,000.00	CCARD
Sub-total					1,000,000.00		
C. COMMON LABORATORY EQUIPMENT							
C.1	PH METER	PH range: -2.0-20pH; pH Accuracy: ± 0.2mV; resolution: 0.1, 1mV, selectable; Calibration points: up to 5 points; stability conditions: Low or high, selectable; Memory: 500 data sets with date/time stamping; Output: USB communications interface; LCD display: custom dual-display LCD (130x110mm);Power requirements: DC5V, using AC adapters, 220 VAC/ 50 Hz, UPS	unit	1	160,000.00	160,000.00	NPRCRTC
C.2	AUTOCLAVE	Capacity: 54 liters; Dimensions:460mmx542mmx1070mm (WxDxH); Rater power supply:220V, 50hz/60Hz; Rate Power: 2300 W; working environment: 5°C-138°C, relative humidity 10%-85%; chamber material: SUS 304; Sterilization temperature: 105-135°C; Range of melting time: 1-300 min; Melting temperature: 60-100 °C; Preset range of warming: 45-60°C; Preset range of warming: 1-9999min; Exhausting mode: with fully automatic internal discharging embedded with a steam trapping bottle; Range of pressure gauge: 0-0.6 MPa, with AVR or UPS, 220 VAC, 60 hz	unit	1	340,000.00	340,000.00	NPRCRTC
C.3	TOP LOADING BALANCE	DC adapter: input 220 VAC/50 Hz, out put 7.5VDC/600mA; Baud Rate Options: 300,600,1200, 2400, 4800,9600; ambient Temperature: 4-44°C; Standard RS232 output interface; with multiple weighing units: G, Ct, Oz, Dwt; Maximum capacity: 500g; Tare Range: 500g; Repeatability (standard Deviation) ≤ (g): ±0.0001; External Calibration weights (the lowest accuracy grade (g): 500 (F1); External weights calibration point (g): 100\200\500. 22- VAC, 60 hz, with AVR	unit	1	65,000.00	65,000.00	NPRCRTC
Sub-total					565,000.00		
GRAND TOTAL					1,845,000.00		